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DUNCAN

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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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# Office Action Summary

Application No.  
09/547,627

Applicant(s)  
Duncan et al

Examiner  
Bing Bul

Art Unit  
2642



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Apr 12, 2000
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☒ Claim(s) 48-50 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirements.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:

- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3 20) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1, 3-35, 37-44 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Walker et al (US Pat No. 6,088,444).

**Regarding claim 1**, Walker et al teach the invention as claimed, a method for ordering inbound inquiries comprising:

receiving plural inbound inquiries, each inbound inquiry having associated inquiry information (Figs 5-8 and col 5, ln 24-col 6, ln 28);

applying a model to the inquiry information to determine a priority value for each inquiry (Figs 5-8 and col 5, ln 24-col 6, ln 28); and

ordering the inbound inquiries with the priority values (Figs 5-8 and col 5, ln 24-col 6, ln 28).

**Regarding claim 3**, Walker et al teach the invention as claimed, wherein the method inquiries comprise instant messages (col 2, ln 49-54).

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**Regarding claim 4**, Walker et al teach the invention as claimed, wherein the inbound inquiries comprise inbound telephone calls having associated caller information (col 5, ln 24-31).

**Regarding claim 5**, Walker et al teach the invention as claimed, wherein the caller information comprises automatic number identification information (col 5, ln 24-31).

**Regarding claim 6**, Walker et al teach the invention as claimed, 25 6. wherein caller information comprise destination number identification information (col 5, ln 24-31).

**Regarding claim 7**, Walker et al teach the invention as claimed, the method further comprising the step of gathering the caller information with a voice response unit (col 5, ln 41-54).

**Regarding claim 8**, Walker et al teach the invention as claimed, the method further comprising:

associating demographic information with each inbound telephone call based on the caller information of the inbound call (Figs 5-8 and col 5, ln 24-col 6, ln 28); and

applying the model to the caller information to determine the priority value for each telephone call (Figs 5-8 and col 5, ln 24-col 6, ln 28).

**Regarding claim 9**, Walker et al teach the invention as claimed, wherein the model predicts caller behavior (col 3, ln 46-col 4, ln 8).

**Regarding claim 10**, Walker et al teach the invention as claimed, wherein the priority

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value comprises a probability that the telephone call will result in a purchase (col 3, ln 46-col 4, ln 8).

**Regarding claim 11**, Walker et al teach the invention as claimed, wherein the priority value comprises a probability that the caller associated with the telephone call will terminate the call after a hold time (col 3, ln 46-col 4, ln 8).

**Regarding claim 12**, Walker et al teach the invention as claimed, the method further comprising the step of developing plural models from a history of inbound inquiries to forecast plural outcomes that determine the priority value (col 3, ln 64-col 4, ln 8 and col 6, ln 29-42).

**Regarding claim 13**, Walker et al teach the invention as claimed, wherein developing the model further comprises: applying regression analysis to the history to calculate the priority value (col 3, ln 64-col 4, ln 8 and col 6, ln 29-42).

**Regarding claim 14**, Walker et al teach the invention as claimed, the method further comprising the step of:

determining the outcomes of the plural inbound inquiries (col 3, ln 64-col 4, ln 8 and col 6, ln 29-42); and

updating the history with the outcomes of the plural inbound inquiries (col 3, ln 64-col 4, ln 8 and col 6, ln 29-42).

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**Regarding claim 15**, Walker et al teach the invention as claimed, wherein developing the caller model further comprises: updating the model with the updated history (col 3, ln 64-col 4, ln 8 and col 6, ln 29-42).

**Regarding claim 16**, Walker et al teach the invention as claimed, a method for determining inbound telephone call priority, the method comprising:

developing one or more models from a history of inbound calls, the history having caller information and outcome results from inbound telephone calls (col 3, ln 46-col 4, ln 8);

applying the model to caller information of a pending inbound call to predict an outcome of the pending inbound call (col 3, ln 46-col 4, ln 8); and

associating a priority with the pending inbound call, the priority based on the predicted outcome (col 3, ln 46-col 4, ln 8).

**As to claims 17-19**, they are rejected for the same reasons set forth to rejecting claims 4-6, respectively.

**Regarding claim 20**, Walker et al teach the invention as claimed, wherein the caller information further comprises account information, the method further comprising the step of obtaining account information for the pending inbound call, the account information stored in a database by association with the telephony information (col 3, ln 15-38).

**As to claim 21**, it is rejected for the same reasons set forth to rejecting claim 7.

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**As to claim 22**, it is rejected for the same reasons set forth to rejecting claim 20.

**As to claims 23-25**, they are rejected for the same reasons set forth to rejecting claims 9-11, respectively.

**Regarding claim 26**, Walker et al teach the invention as claimed, the method further comprising the step of placing the pending inbound call in the queue of an automatic call distribution system in an order based on the priority of the pending inbound call (col 3, ln 15-25).

**As to claim 27**, it is rejected for the same reasons set forth to rejecting claim 16.

**Regarding claim 28**, Walker et al teach the invention as claimed, wherein the predicted outcome comprises the hold time of the pending inbound call (col 6, ln 29-42).

**Regarding claim 29**, Walker et al teach the invention as claimed, wherein associating priority further comprises optimizing the order for the inbound telephone calls (col 6, ln 43-54).

**Regarding claim 30**, Walker et al teach the invention as claimed, wherein optimizing the order comprises solving a constrained optimization problem using one or estimates from one or more models (col 6, ln 43-54).

**Regarding claim 31**, Walker et al teach the invention as claimed, wherein optimizing further comprises maximizing agent productivity to minimize caller attrition (col 6, ln 43-54).

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**Regarding claim 32**, Walker et al teach the invention as claimed, wherein optimizing further comprises maximizing agent productivity to produce sales (col 6, ln 43-54).

**Regarding claim 33**, Walker et al teach the invention as claimed, system for scheduling inbound calls comprising:

a receiving device operable to receive plural inbound inquiries and to provide the inbound inquiries to one or more agents (Figs 1-2 and col 3, ln 15-25);

a scheduling module interfaced with the receiving device, the scheduling model operable to order the inbound inquiries for handling by the receiving device, the order based in part on the predicted outcome of the inbound inquiries (col 3, ln 46-col 4, ln 8).

**As to claims 34-35**, they are rejected for the same reasons set forth to rejecting claim 26 above, since claims 34-35 are merely a system for implementing the method defined in the method claim 26.

**As to claim 37**, it is rejected for the same reasons set forth to rejecting claim 7 above, since claim 37 is merely a system for implementing the method defined in the method claim 7.

**Regarding claim 38**, Walker et al teach the invention as claimed, the system further comprising:

an inbound call history data base operable to store outcome results and caller information from plural completed inbound calls (col 3, ln 64-col 4, ln 8 and col 6, ln 29-42); and



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a modeling module interfaced with the history database and operable to model inbound call outcomes from the stored outcome results and caller information (col 3, ln 64-col 4, ln 8 and col 6, ln 29-42).

**As to claim 39**, it is rejected for the same reasons set forth to rejecting claim 33.

**As to claim 40**, it is rejected for the same reasons set forth to rejecting claim 26 above, since claim 40 is merely a system for implementing the method defined in the method claim 26.

**As to claim 41**, it is rejected for the same reasons set forth to rejecting claim 12 above, since claim 41 is merely a system for implementing the method defined in the method claim 12.

**As to claim 42**, it is rejected for the same reasons set forth to rejecting claim 29 above, since claim 42 is merely a system for implementing the method defined in the method claim 29.

**As to claim 43**, it is rejected for the same reasons set forth to rejecting claim 31 above, since claim 43 is merely a system for implementing the method defined in the method claim 31.

**As to claim 44**, it is rejected for the same reasons set forth to rejecting claim 1.

**As to claim 46**, it is rejected for the same reasons set forth to rejecting claim 3.

### ***Claim Rejections - 35 U.S.C. § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 2, 36, 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al as applied to claims 1, 33 and 44 above, and further in view of Rogers et al (US Pat No. 5,946,386).

**Regarding claims 2, 36, 45 and 47,** Walker et al teach the invention substantially as claimed, with exception of providing the plural media comprise telephone calls and e-mail messages and voice of internet. However, Rogers et al disclose a system in which communication users can communicate to each other in form of voice and data via Internet (Fig 1; col 11, ln 45-50 and col 28, ln 42-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the use of internet as taught by Rogers et al into communication system of Walker et al to enable the communication users to exchange the e-mail or voice which

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which provides more communication flexibility and communication cost saving to such communication users.

*Allowable Subject Matter*

5. Claims 48-50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Oliphant et al (US Pat No. 4,881,261) disclose a system and method for scheduling calls based on call priority and call back date and time.

Steinlicht (US Pat No. 5,335,269) discloses a system and method for routing call to most desirable destination.

Dekelbaum et al (US Pat No. 5,838,682) disclose a system and method for implementing voice over internet.

Gisby (US Pat No. 6,002,760) discloses a system and method in which a caller may disconnect from a queue and wait for a call back without losing priority in the queue.

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Letellier (US Pat No. 6,154,530) discloses a call back list according to an order of priority determined by the call back profile of the user of the mobile telephone.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bing Bui whose telephone number is (703) 308-5858. The examiner can normally be reached on Monday through Thursday from 7:30 to 5:00.

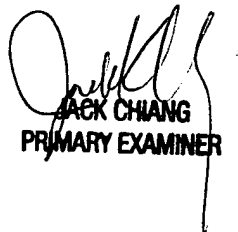
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on (703) 305-4731. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-6306 and for formal communications intended for entry (please label the response "EXPEDITED PROCEDURE") or for informal or draft communications not intended for entry (please label the response "PROPOSED" or "DRAFT").

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Bing Bui

Patent Examiner

May 19, 2001

  
JACK CHIANG  
PRIMARY EXAMINER